1. KARYAKIN, N.A.; MAL'GIN, M.G.; MESHKOV, V.V.; KUZNETSOV, V.V.

2. USSR (600)

4. Electric Engineers

7. Professor N.A. Karyakin, Fiftieth birthday anniversary, M.G. Mal'gin, V.V. Meshkov, V.V. Kuznetsov, Elektrichestvo no. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Unel.

CHILIKIN, M.G.; KOSTROV, M.F.; GLAZUNOV, A.A.; MESHKOV, V.V.; SOLOV'YEV, I.I.; VENIKOV, V.A.

L.I. Sirotinskii, honored worker in science and engineering. Elektrichestvo no.6:91 Je '54. (MLRA 7:7)
(Sirotinskii, Leonid Ivanovich, 1879-)

CHILIKIN, M.G.; LARIONOV, A.N.; PETROV, G.N.; MESHKOV, V.V.; GOLOVAN, A.T.; LYSOV, N.Ye.; PANTYUSHIN, V.S.; KURBATOVA, N.S.; SMIRNOV, V.A.

Professor E.V.Nitusov. Elektrichestvo no.6:85 Je '55.(MLRA 8:6)
(Nitusov, Evgenii Vasil'evich, 1895-)

SHATELEN,M.A.; MESHKOV,V.V.; PETROV,G.N.; KISELEV,A.S.; BEL'KIND,L.D.

S.O.Maizel'. Elektrichestvo no.10:85 O'55. (MLRA 8:12)
(Maizel', Sergei Osipovich, 1882-1955)

AID P - 4091

Subject : USSR/Electricity

Card 1/1 Pub. 27 - 2/24

Author : Meshkov, V. V., Prof. Distinguished Worker in Science and Engineering

Title : Scientific activity of the Moscow Power Engineering Institute im. Molotov.

Periodical : Elektrichestvo, 11, 9-12, N 1955

Abstract : The author describes the various fields of the scientific and research activity of the Institute and enumerates the various scientists, professors and engineers who have contributed to the development of the Institute.

Institution : None

Submitted : S 5, 1955

GOLUBTSOVA, V.A.; CHILIKIN, M.G.; MARGULOVA, T.Kh.; MESHKOV, V.V.; DROZDOV, N.G.; PEREKALIN, M.A.; SMIRNOV, V.A.

Professor V.S. Pantiushin. Elektrichestvo no.7:93 Jl'56. (MLRA 9:10)

(Pantiushin, Vasilii Sergeevich, 1906-)

MESHKOV, V.V., doktor tekhnicheskikh nauk, professor.

S.I. Vavilov, outstanding representative of Soviet science.
Svetotekhnika 2 no.1:27-28 Ja '56. (MLRA 9:3)
(Vavilov, Sergei Ivanovich, 1891-1951)

GUREVICH, M.M., professor; KARYAKIN, N.A., professor; MESHKOV, V.V., professor; SOKOLOV, M.V., professor; TIKHODEYEV, P.N., professor; FABRIKANT, V.A., professor; IVANOVA, N.S., kandidat tekhnicheskikh nauk; SHNEYBERG, Ya.A.; YUROV, S.G.; ASHKENAZI, G.I., inzhener.

Professor L.D. Bel'kind; on his sixtieth birthday. Svetotekhnika ? no.5:26 S '56. (MLRA 9:11)

(Bel'kind, Lev Davidovich, 1896-)

Meshkov, V.V.

CHILKIN, M.G.; MESHKOV, V.V.; GOLUBTSOVA, V.A.; SIROTINSKIY, L.I.; VENIKOV, V.A.; ZOLOTAREV, T.L.; KOLFEDRATOV, I.Ya.; SHNEYBERG, Ya.A.; VESELOVSKIY, O.N.

Professor L.D.Bel'kind. Elektrichestvo no.8:93-94 Ag '56. (MLRA 9:10)
(Bel'kind, Lev Davidovich, 1896-)

MESHKOV, V. (Prof.)

"Production Workers Prepare to Enter Higher Educational Institutions,- A Well Thought-Out System is Necessary," Vechernyaya Moskva, 7 June 1957, PP. 6.

Deputy Director, Moscow Power Engineering Inst. im. Molotov

Trans - U-3,055,385

MESHKOV, V. V

Call Nr: TH 7703.M43

AUTHOR: Meshkov, V. V.

TITLE: Principles of Illuminating Engineering (Osnovy svetotekhniki) First Part (Chast' pervaya)

PUB. DATA: Gosudarstvennoye energeticheskoye izdatel'stvo, Moscow and Leningrad, 1957, 352 pp., 7000 copies

ORIG. AGENCY: Ministerstvo vysshego obrazovaniya SSSR. Glavnoye upravleniye politicheskikh i mashinostroitel'nykh vuzov

EDITORS: Ashkenazi, G. I., and Tech. Ed.: Larionov, G. I..

PURPOSE: This monograph is a handbook for students taking a course in the principles of illuminating engineering.

COVERAGE: The book consists of a series of lectures delivered by the author in 1949 at the Moscow Power Engineering Institute im. V. M. Molotov. It presents only the first part of the course on illuminating engineering. It deals with the systems of radiant and effective values in

Card 1/12

Call Nr: TH 7703 M43

Principles of Illuminating Engineering First Part (Cont.)

optical radiation, the principles of theoretical photometry and the basic laws in radiation transformation; i.e., thermal and photoelectric effects, photoluminescence, photochemical and photobiological effects. The principles of color and physiological optics are to be covered in the second part of the handbook for use in the lecture course. The author thanks members of the Department of Illuminating Engineering at the MEI (Moscow Institute of Power Engineering) namely, Dashkevich, L. L., Doctor of Technical Sciences, Professor; Lebedev, P. D., Doctor of Technical Sciences, Professor; Surinov, Yu. A., Doctor of Technical Sciences, Professor; Ashkenazi, G. I., Engineer; Gutorov, M. M., Candidate of Technical Sciences; and Krupennikova, L. I., Aspirant. The book contains 102 references, of which 79 are USSR, 9 English, 9 translations from English, 4 German, 1 Latin.

Card 2/12

MESHKOV, V. V. (Doctor of Technical Sciences)

Moscow. Ener eticheskiy institut

Istoriya energeticheskoy tekhniki SSSR v trekh tomakh. t. 1: Teplotekhnika (History of Power Engineering in the USSR in Three Volumes. v. 1: Heat Engineering) Moscow, Gosenergoizdat, 1957. 479 p. 5,000 copies printed.

Ed.-Compiler: Konfederatov, I.Ya., Doctor of Technical Sciences; Authors: Badyl'kes, I.S., Doctor of Technical Sciences; Belindki, S.Ya., Candidate of Technical Sciences; Gimmel'farb, M.L., Candidate of Technical Sciences; Kalafati, D.D., Candidate of Technical Sciences; Kertselli, L.I., Professor; Kovalev, A.P., Doctor of Technical Sciences; Konfederatov, I.Ya., Doctor of Technical Sciences; Lavrov, V.N., Doctor of Technical Sciences; Lebedev, P.D., Doctor of Technical Sciences; Lukinskiy, V.V., Doctor of Technical Sciences (deceased); Retunov, B.S., Doctor of Technical Sciences; Satanovskiy, A.Ye., Doctor of Technical Sciences; Semenenko, N.A., Doctor of Technical Sciences; Smel'nitskiy, S.L., Candidate of Technical Sciences; Sokolov, Ye.Ya., Doctor of Technical Sciences; Chistyakov, S.F., Candidate of Technical Sciences, and Shcheglyayev, A.V., Corresponding Member, USSR Academy of Sciences; Editorial Board of set: Bel'kind, L.D., Doctor of Technical Sciences; Glazunov, Doctor of Technical Sciences; Golubtsova, V.A., Doctor of Technical Sciences; Zolotarev, T.L., Doctor of Technical Sciences; Izbash, S.V., Doctor of Technical Sciences; Kirillin, V.A., Corresponding Member, USSR Academy of Sciences;

Konfederatov, I.Ya., Doctor of Technical Sciences; Marmulova, T.Kh., Doctor of Technical Sciences; Meshkov, V.V., Doctor of Technical Sciences; Petrov, S.N., Doctor of Technical Sciences; Sirotinskiy, L.I., Doctor of Technical Sciences; Styrikovich, M.A., Corresponding Member, USSR Academy of Sciences; and Shneyberg, Ya.A., Candidate of Technical Sciences. Ed.: Matveyev, S.A., Doctor of Technical Sciences; Technical Ed.: Medvedev, L.Ya.

PURPOSE: The book is intended for technicians in all branches of heat engineering.

COVERAGE: This book presents the development of the basic branches of heat engineering in the Soviet Union and it is the first volume of 3 volumes entitled History of Power Technology in the USSR. The first chapter gives a concise history of the development of heat engineering from its very beginning to the middle of the 19th Century when the fundamentals of the theoretical heat engineering were established. A detailed description of the development of heat engineering in pre-Revolutionary Russia is given in Ch. 2 to 5 and its status before 1917 is described. In the main part of the volume, Ch. 6 to 16, the development of various branches of the Soviet heat engineering is presented. The theoretical fundamentals of heat engineering, of manufacturing boilers, turbine installations of heat power plants, district heating, heat control, automation of thermal processes, and cooling techniques are covered extensively. Each chapter is supplemented with a bibliography. The book is illustrated with photographs, charts and diagrams, worked out by the authors of the respective chapters. At the end of the book there is a chronological list of significant events in the development of heat engineering.

CHILIKIN, M.G.; MESHKOV, V.V.; YEFREMOV, I.S.; GOLOVAN, A.T.; SVENCHANSKIY, A.D.

Professor D. K. Monov; on his 60th birthday and 35th anniversary in scientific, pedagogical, and engineering activity. Elektrichestvo no.3:95 Mr '57. (MLRA 10:4)
(Monov, Dmitrii Konstantinovich, 1896-)

MESHKOV, L.K., professor, doktor tekhnicheskikh nauk; RYABOV, M.S., kandidat tekhnicheskikh nauk.

Limiting glare effects in the use of fluorescent lighting equipment. Svetotekhnika 3 no.2:24-26 F '57. (MLRA 10:3)

1. Moskovskiy energeticheskiy institut Gosudarstvennogo politekhnicheskogo instituta Tyazhpromelektroproyekt.
(Fluorescent lighting)

BEL'KIND, L.D., doktor tekhn. nauk, prof.; MESHKOV, V.V., doktor tekhn. nauk, prof.

Illumination engineering education in the U.S.S.R. Svetotekhnika 3 no.11:29-36 N '57. (MIRA 10:12)

1. Moskovskiy energeticheskiy institut.
(Technical education) (Lighting)

MESHKOV, V.V., doktor tekhn. nauk, prof.; RYABOV, M.S., kand. tekhn. nauk.

On norms for artificial lighting. Svetotekhnika 3 no.12:20-23 D '57.
(MIRA 11:1)

1. Moskovskiy energeticheskiy institut i Gosudarstvennyy proyektnyy institut "Tyazhpromelektroproyekt."
(Lighting)

VUL'FSON, K.S., prof.; GUREVICH, M.M., prof.; MESHKOV, V.V., prof.; NILENDER, R.A., prof. YUROV, S.G., kand. tekhn. nauk; SOKOLOV, M.V., prof.; BIBERMAN, L.M., kand. tekhn. nauk; BUTAYEVA, F.A., kand. tekhn. nauk; IVANOVA, N.S., kand. tekhn. nauk; SUSHKIN, N.G., kand. tekhn. nauk.

Valentin Aleksandrovich Fabrikant; on his 50th birthday. Svetotekhnika 3 no.12:24-25 D '57. (MIRA 11:1)
(Fabrikant, Valentin Aleksandrovich, 1907-)

MOSHKOV, V.V., prof.; SOKOLOV, M.V., prof.; TIKHODEYEV, P.M., prof.; FEDOROV, B.F., prof.; RYABOV, M.S., kand. tekhn. nauk.

Professor V.N. Kilanitsa; on his 70th birthday. Svetotekhnika 4 no.1: 28 Ja '58. (MIRA 11:1)
(Kilanitsa, Viktor Nikolaevich, 1887-)

MESHKOV, V.V., doktor tekhn. nauk, prof.

Problems in lighting engineering. Svetotekhnika 4 no.3:19-24 Mr '58.
(MIRA 11:2)

1. Moskovskiy energeticheskiy institut.
(Lighting)

MESHKOV, V.V., prof., doktor tekhn.nauk

Lightness and brightness. Svetotekhnika 4 no.12:1-5 D '58.
(MIRA 11:12)

1. Moskovskiy energeticheskiy institut.
(Optics, Physiological)

MESHKOV, Vladimir Vasil'yevich; SOKOLOV, Ivan Ivanovich. Prinimal uchastiye RYABOV, M.S., kand.tekhn.nauk. ASHKENAZI, G.I., inzh., red.; VORONIN, K.P., tekhn.red.

[Course in lighting engineering] Kurs osvetitel'noi tekhniki. Izd.5., ispr. i dop. Moskva, Gos.energ.izd-vo, 1960. 262 p. (MIRA 13:11)

(Electric lighting)

MESHKOV, V.V.

Review of I.B. Levitin's "Infared radiation technology." Svetotekhnika 6 no.10:31 O '60. (MIRA 13:9)
(Infrared rays)
(Levitin, I.B.)

MESHKOV, V.V., prof.

Review of R.A. Sapozhnikov's monograph "Theoretical photometry; principles of lighting calculations". Reviewed by V.V. Meshkov. Svetotekhnika 6 no. 12:28-29 D '60. (MIRA 14:1)
(Photometry) (Sapozhnikov, R.A.)

CHILIKIN, M.G.; LARIONOV, A.N.; ANDRIANOV, K.A.; MESHKOV, V.V.; IONKIN, P.A.; ARKHIPOV, V.N.; PETROV, G.N.; BRAGIN, S.M.; PRIVEZENTSEV, V.A.; TAREYEV, B.M.

Professor N.G. Drozdov. Elektrichestvo no.10:90 O '60. (MIRA 14:9)

(Drozdov, Nikolai Gavrilovich, 1900-)

MESHKOV, Vladimir Vasil'yevich; GUREVICH, M.M., prof., doktor tekhn. nauk, retsenzent; LUIZOV, A.V., doktor fiz.-matem.nauk, retsenzent; ASHKINAZI, G.I., inzh., red.; LARIONOV, G.Ye., tekhn.red.

[Principles of lighting engineering] Osnovy svetotekhniki. Moskva, Gos.energ.izd-vo. Pt.2. [Physiological optics and colorimetry] Fiziologicheskaia optika i kolorimetriia. 1961. 416 p. (MIRA 14:4)
(Colorimetry) (Optics)

MESHKOV, V.V., doktor tekhn.nauk, prof.

Sergei Vasil'evich Kravkov. Svetotekhnika 7 no.3:16-18 Mr '61.
(MIRA 14:8)

1. Moskovskiy energeticheskiy institut.
(Kravkov, Sergei Vasil'evich, d. 1951)

MESHKOV, V.V.; SOKOLOV, I.I.

Concerning the terminology, designations, and content of manuals on the general course in lighting engineering. Svetotekhnika 7 n.12: 29-30 D '61. (MIRA 14:12)

(Electric lighting)

LEVITIN, Isidor Borisovich; LEONT'YEV, Aleksandr Sergeyevich; MESHKOV, V.V., doktor tekhn. nauk, retsenzent; BARSHAY, M.M., insh., retsenzent; DUBOVIK, V.A., nauchnyy red.; GOLUBEVA, N.P., red.; FRUMKIN, P.S., tekhn. red.

[Lighting engineering on ships] Sudovaia svetotekhnika. Leningrad, Sudpromgiz, 1963. 300 p. (MIRA 16:5)
(Electric lighting of ships)

FOL'B, Rakhil' L'vovna; BELOV, A.A., inzh., retsenzent; MESHKOV, V.V., doktor tekhn. nauk, prof., red.

[Principles of flashing light signals] Osnovy vizual'noi probleskovoi signalizatsii. Moskva, Mashinostroenie, 1964. 98 p. (MIRA 17:7)

ILYUSHIN, S.V.; IPATOVA, S.I.; KONKVALOV, F.S.; LOEMTSSON, I.G.; MAYSHAK, I.S.; MESHKOV, V.V.; NIENDER, E.A.; PLOKHOTSKIY, Ye.S.; SOKOLOV, I.I. SOUSTIN, V.F.; TSVETKOV, G.M.; YANI, S.Z.

Viktor Nikolaevich Fomin, 1904- ; on his 60th birthday. Svetotekhnika 10 no.11:30 N '64. (MIRA 17:12)

L 3129-66 EWT(1)/EWA(j)/EWT(m)/EWA(b)-2/EWA(h) RO/JK

AM5023887 BOOK EXPLOITATION UR/

44,55

Gritchenko, Nikolay Vasil'yevich; Danishevskiy, Isay Naumovich; Moshkov, Vasiliy Vasil'yevich (Docent; Candidate of Medical Sciences)

44,55 44,55 34 28 B+1

Giving first aid to victims of mass-destruction weapons (Okazaniye pervoy meditsinskoy pomoshchi postradavshim ot oruzhiya massovogo porazheniya). Moscow, Izd-vo DOSAAF, 1964. 63 p. illus. Number of copies printed not given.

TOPIC TAGS: first aid, chemical warfare, bacteriological warfare

PURPOSE AND COVERAGE: This book is intended for the general public. It is a civil-defense manual describing methods of giving first aid to victims of mass-destruction weapons. A study of this manual is recommended by the authors in order to better acquaint the public with the problem of self preservation in the event of war.

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TABLE OF CONTENTS [abridged]: -- 64

Ch. I. Giving first aid to victims of nuclear explosion -- 3

Ch. II. Giving first aid to victims of chemical warfare -- 39

Ch. III. Methods of preventing infection in bacteriological warfare -- 50

SUB CODE: CB SUBMITTED: 31Oct63 NO REF SOV: 000

OTHER: 000

Card 2/2

18(5), 25(5) SOV/125-59-9-1/16

AUTHOR: Kazimirov, A.A., Candidate of Technical Sciences, Bondar', V.Kh., Veshkov, V.V., and Tozovskiy, V.P., Engineers

TITLE: Three-Electrode Automatic Welding of Fillet and Groove Welds under Powder Flux

PERIODICAL: Avtomaticheskaya svarka, 1959, Nr 9, pp 3-10 (USSR)

ABSTRACT: In large serial production of structures with long welds, such as beams, columns, tubes, wings, etc., the speeding-up of the welding process plays an important role. This impelled the Institute of Electric Welding imeni Ye.O. Paton, to carry out systematic research on welding under forced conditions. In 1946-1948, the Institute worked out the process of automatic welding under powder flux permitting making the longitudinal groove welds at a speed of 100-120 m/hour. Later on, the process of double-arc welding was introduced and raised the welding efficiency up to 150 m/hour. In

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SOV/125-59-9-1/16

Three-Electrode Automatic Welding of Fillet and Groove Welds under Powder Flux

1955-1956, research on technology of three-electrode automatic welding of large-section double-T beams was conducted. On the basis of experiments, it was determined that groove welding of beams having wallsides 8-20 mm thick, (Fig 1), can be accomplished by the three-electrode method at a speed of 100-180 m an hour. Three-electrode welding can be performed using a 3-6 mm electrode wire; for this purpose both direct and alternating current can be applied. Welding with the first electrode provides good results independently of whether its current differs from that of the other two arcs. The first arc heats the edges to be welded, the second and the third increase the depth and width of fusing; combined action of all three electrodes permits welding at high speeds, which are unattainable when other methods of arc welding are used. Tables 1 and 2 give specific conditions of welding for two-sided groove-welds. The three-electrode process enables

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Three-Electrode Automatic Welding of Fillet and Groove Welds under Powder Flux

performing of high quality fillet welds at a speed up to 100 m/hour, provided the carbon content in welds is under 0.13%; the groove welding speed can be brought up to 180 m/hour. Automatic three-electrode welding is a variety of three-phase welding and possesses all the advantages of the latter. Chemical composition of the weld metal and its mechanical properties can be regulated within broad limits by using electrodes of different makes and diameters. There are 4 graphs, 10 tables 3 diagrams and 5 references, 4 of which are Soviet and 1 German.

ASSOCIATION: Ordena trudovogo krasnogo znameni institut elektrosvarki imeni Ye. O. Patona AN USSR (Order of the Red Banner of Labor Institute of Electric Welding imeni Ye.O. Paton AS Ukr SSR)

Card 3/3

SUBMITTED: April 8, 1959

25(1) SOV/125-60-2-11/21

AUTHOR: Meshkov, V.V.

TITLE: The Welding of Continuous Tack Welds in Line Production of Welded Double-T Structural Elements

PERIODICAL: Avtomaticheskaya svarka, 1960, Nr 2, pp 83-84 (USSR)

ABSTRACT: Brief information is given on a new welding technology developed at the Institute of Electric Welding imeni Ye.I. Paton of the AS UkrSSR for the production of thin-wall double-T structural elements having a wall height of up to 2000-mm and shelves up to 600-mm wide, such as are used in construction and machine building. The elements are joined first by preliminary continuous welds and welded finally on a special welding stand by four single-arc "A-560" welders of institute's design, running simultaneously along the four joints between the wall and the shelves. A welding speed of 144 m/hour can be attained with the one-electrode method with the electrode held at a 35° angle.

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The Welding of Continuous Tack Welds in the Line Production of Welded Double-T Structural Elements

electrode wire 5-mm in diameter and "AN-60" flux is used. The preliminary welds fuse into the larger permanent weld (photograph). The welding process parameters are given. There is 1 photograph and 1 table.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye.O. Patona AN USSR (Order of the Red Banner of Labor Institute of Electric Welding imeni Ye.O. Paton of the AS UkrSSR).

SUBMITTED: August 14, 1959.

~~25(1)~~ 18.7200

80267
S/125/60/000/04/012/018
D003/D006

AUTHOR: Chvertko, A.I., Meshkov, V.V. and Lozovskiy, V.P.

TITLE: Three-Arc Welding of Butt and Angle Welds in Production of Welded Beams

PERIODICAL: Avtomaticheskaya svarka, 1960, Nr 4, pp 78-81 (USSR)

ABSTRACT: Institut elektrosvarki (the Electric Welding Institute), or ("IES") has been consistently working on the development of high-speed welding methods, and during 1946-1959, it developed two-arc process for the use in special pipe-welding work shops, created by "IES" for this purpose. The two-arc process, allows welding at speeds of 100 to 150 m/hr, and was described previously /Ref. 1,2/, and is used for welding RR gondola car beams and ship hull sections /Ref. 3/. During 1956-1959, "IES" developed a fully automatic welder -"A-615", /Photo, figure 1/

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Three-Arc Welding of Butt and Angle Welds in Production of Welded Beams

working with three arcs simultaneously. The welder consists of a self-propelling "bicycle" carriage with a vertical and a horizontal telescopic rods and three welding heads suspended to the vertical rod. Welding speed is adjustable between 38 and 200 m/hr by shift gears; current up to 2,000 amp and wire of 3, 4 and 5mm diameter can be used. The electrode holders swing freely to follow the outline of work; a special copying device with rollers copies the work in vertical direction. The machine is fully automatic, and can be switched over to semi-automatic or hand controls. Data on welding process is given. To take up the welding pool crater at the beam end, a plate of 150-200 mm is used (Figure 2). The "A-615" welder

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Three-Arc Welding of Butt and Angle Welds in Production of Welded Beams

has passed laboratory and shop tests. Several welders of this type were produced for a beam welding line at the zavod im. Babushkina (Plant imeni Babushkin) in Dnepropetrovsk. There are 3 photographs, 1 drawing, and 4 Soviet references.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im Ye.O. Patona AN USSR (Order of the Red Banner of Labor Electric Welding Institute imeni Ye.O. Paton of the AS UkrSSR)

SUBMITTED: 22 Dec 1959

Card 3/3

1.2300 also 1573

21913
S/125/60/000/011/008/010
A161/A133

AUTHORS: Kazimirov, A.A., Lozovskiy, V.P., and Meshkov, V.V.

TITLE: The technique of beginning and ending the seam in automatic three-arc submerged arc welding

PERIODICAL: Avtomaticheskaya svarka, no. 11, 1960, 49-51

TEXT: The automatic three-arc process developed by the Electric Welding Institute im.Ye.O.Paton had been described previously (Ref.1, "Avtomaticheskaya svarka", No.9, 1959), and also the three-arc welder "A-615" (Ref.2, "Avtomaticheskaya svarka", No.4, 1960). Fillet welds on T-joints and butt welds can be welded with a speed of 100 and 180 m/hr respectively. The major feature of the process are three electrodes in line moving simultaneously along the seam, with the first electrode far ahead of the two others. Special means were needed to reduce to a minimum the length of spoiled seam ends. It was found that the first arc must be ignited only after the welder has gained the operating speed, and the welding transformers must have a

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high idle-run voltage to make the ignition dependable. For 1,100-1,700 amp on the first arc a reliable ignition is obtained with transformers of 90 ÷ 110 v idle-run voltage. The second and third arc must be ignited simultaneously at the same spot where the first arc had been ignited before. Practically the time between the ignition of the first arc and the two following is 3.5-6 sec. The second and third arcs need transformers with lower idle-run voltage for the metal is already fused by the first arc. The loose plank for the welding start must be 120 mm long. The welding start had to be automated to simplify it and not make depending on the skill of the operator. Various electrical and electro-mechanical systems may be used. The "A-615" apparatus (Ref.2) has an electro-mechanical starting system, using limit switches in the control circuits of electric motors driving the welding heads. The limit switches are moving with the welder and closing the control circuits by contacting a fixed plank. The system proved reliable in tests. The welding of the seam end in three-arc process is difficult because of a long molten metal pool, up to 450 mm. The crater would be too long if all arcs were extinguished simultaneously. The problem was solved by using the sequence illustrated in the diagram, stopping the feed of separate electrodes in turn, and reducing the welding speed by steps. All

welding operations on the crater portion of the seam are completed on a lead-out plank. As seen in the diagram, the feed of the first electrode ceases after the first arc has passed 20-35 mm on the lead-out plank. The process is continued with the second and third arc. As soon as the metal fused with the first arc is welded through by the two remaining arcs, the welding speed drops to 31.5 m/hr and is continued on 5-35 mm with two arcs. Then the feed of the third electrode stops, and 10-15 mm of the seam end are welded with the second arc alone. With a 150 mm long lead-out plank the crater is removed completely from the work. The process must be stopped 30-40 mm before the plank end to prevent spilling of liquid metal and slag. The automation principle for the seam end is same as for the beginning. There is 1 figure and 2 Soviet references.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im.Ye. O.Patona AN USSR ("Order of the Red Banner of Labor" Electric Welding Institute im.Ye.O.Paton of the Academy of Sciences of the UkrSSR

KAZIMIROV, A.A.; MESHKOV, V.V.

Approximation method of calculating conditions of three-electrode automatic butt welding. Avtom. svar. 17 no.7:25-29 Jl '64.
(MIRA 17:8)

1. Institut elektrosvarki im. Ye.O. Patona AN UkrSSR.

MESHKOV, Ye.D.

Universal pneumatic lever-type vises with a floating cylinder.
Mashinostroitel' no.4:24 Ap'64 (MIRA 17:7)

137-58-4-8537

Translation from Referativnyy zhurnal, Metallurgiya, 1958 Nr 4 p 116 (USSR)

AUTHOR Meshkov, Yu. A.

TITLE The EMT-1 Electronic-magnetic Thickness Gauge for Measuring Nonmagnetic Coatings on Steel (Elektronomagnitnyy tolshchemer EMT-1 dlya zamera nemagnitnykh pokrytiy na stal noy osnove)

PERIODICAL V sb. Materialy nauchno-tekhn. konferentsii rabotnikov zavodsk. laboratoriy. Rostov-na-Donu, 1957, pp 115-118

ABSTRACT: A description is presented of a special instrument to measure the thicknesses of nonmagnetic coatings (not over 25 mm) on steel. The gage is based on the change in the distribution of magnetic currents in the two arms of the magnetic circuit of the pickup with change in the magnetic resistance of either. The pickup is made of layers of transformer iron and is H-shaped. A field coil is wound on the middle segment of the magnetic circuit and is fed by a stabilized 36-v potential. Two windings are found on the top and bottom poles of the pickup, the lower for measuring and the upper for compensation. After rectification the emf induced in these windings are delivered to the measur-

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137-58-4-8537

The EMT-1 Electronic-magnetic (cont.)

ing circuit, in counter-current through a sensitive microammeter. The sensitivity of the instrument depends upon the parameters of the pickup windings and upon the sensitivity of the microammeter; it may be quite high, particularly when the coating is thin (not over 7 or 8 mm). An expression (non-linear) for the readings of the instrument versus the thickness of the coating is presented. The instrument error is $\leq 5\%$ at the end of the scale and 1 5% at the beginning.

Z F

1. Steel--Coatings--Measurement 2. Coatings--Measurement-Eq
3. Electronic equipment--Ap; at on

Card 2/2

137-58 4-8540

Translation from Referativnyy zhurnal, Metallurgiya 1958 Nr 4 p 317 (USSR)

AUTHOR Meshkov, Yu.A.

TITLE. Employment of the Ferrous Probe Coercimeter in Place of the Ballistic Apparatus to Measure the Coercive Force of Magnetically Nonretentive Materials (Primeneniye ferrozondovogo koertsitimetra dlya izmereniya koertsitivnoy sily magnitnomyagkikh materialov vmesto ballisticheskoy ustanovki)

PERIODICAL V sb. Materialy nauchno-tekhn. konferentsii rabotnikov zavodsk. laboratoriy. Rostov-na-Donu, 1957, pp 119-121

ABSTRACT. A description is offered of the design of a new ferrous probe coercimeter (C) intended to replace the common ballistic apparatus in the measurement of the coercive force of Armco Fe. The C consists of a special yoke assembled from sheets of transformer steel. The poles of the yoke are connected by the specimen under study, which is in the form of a cylinder 10 mm in diameter and 120 mm long. A 1.0 -1.3 amp current is transmitted through a field coil filling the length of a window in the base of the ferrous probe. To make a measurement, the magnetizing coil is placed over the sample which is between the

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137 58-4 8540

Employment of the Ferrous Probe (cont.)

poles of the yoke. The coil is capable of setting up a flux of 1500 ampere-turns in a brief period and this is enough to saturate the Armco Fe. The moment when demagnetizing current is absent is fixed by the microammeter. Measurements made in this way are 3 to 5 times as fast as with ballistic apparatus. Measurements are accurate to within 0.8% and this degree of precision may be improved if necessary. The ferrous probe C is compact and does not require so sensitive an instrument as the ballistic galvanometer. The process of measurement lends itself readily to automation.

Z F

1. Iron--Magnetic properties--Measurement 2. Iron--Magnetic properties--Testing equipment

Card 2/2

DONSKOV, V.Ye.; IVANOV, F.I.; MESHKOV, Yu.K.; MOLSEYEV, P.N.; KHINKIS, L.A.; KAMENITSER, S.Ye., kandidat ekonomicheskikh nauk, nauchnyy redaktor; MASLOVA, Ye.F., redaktor; GOTLIB, E.M., tekhnicheskiy redaktor.

[Organization and planning of food industry enterprises; bakery, confectionery, macaroni and food concentrate industry] Organizatsiia i planirovanie predpriiatii pishchevoi promyshlennosti; khlebopekarnoi, konditerskoi, makaronnoi i pishchekontsentratnoi. Pod obshchei red. V.E.Donskova. Moskva, Pishchepromizdat. Pt. 1. 1954. 460 p.
(Food industry) (MLRA 8:2)

DONSKOV, Vasiliy Yefimovich, dotsent, kand.ekon.nauk; ZUYEVA, Raisa Vasil'yevna, kand.ekon.nauk; KRUZHKOVA, Raisa Vasil'yevna, kand.ekon.nauk; MESH-KOV, Yuriy Konstantinovich, dotsent, kand.ekon.nauk; MOISEYEV, Petr Nikitich, dotsent, kand.ekon.nauk; PONOMAREVA, Irina Andreyevna, kand. ekon.nauk; KHIMKIS, Lev Akimovich, starshiy prepodavatel'; KAMENITSER, S.Ye., kand.ekon.nauk, retsenzent; nauchnyy red.; BULGAKOV, G.V., kand. ekon.nauk, retsenzent; SHVARTS, V.M., inzh.ekonomist, retsenzent; PRI-TYKINA, L.A., red.; SOKOLOVA, V.A., tekhn.red.

[Production organization and planning in food industry enterprises] Organizatsiia i planirovanie proizvodstva na predpriiatiiakh pishchevoi promyshlennosti. Moskva, Pishchepromizdat, 1959. 605 p. (MIRA 12:9) (Food industry)

BILLIK, Abram Markovich;POZIN, Mark Markovich, kand. ekon. nauk;LOVIKOV, Petr Fedorovich; KAMENITSER, S.Ye., prof., doktor ekon. nauk, retsenzent; MOROZOV, M.V., kand. ekon. nauk, retsenzent; MESHKOV, Yu.K., kand. ekon. nauk, red.; MASLOVA, Ye.F., red.; BRODSKIY, M.P., tekhn. red.

[Organization and planning in refrigeration enterprises] Organizatsiia i planirovanie kholodil'nykh predpriiatii. Moskva, Gos. izd-vo torg. lit-ry, 1961. 276 p. (MIRA 14:10)
(Refrigeration and refrigerating machinery)

MESHKOV, Yuriy Konstantinovich; MARKHEL', F.S., kand. tekhn. nauk, retsenzent; KALITA, N.Ya., kand. ekon. nauk, retsenzent; FUKS, V.K., red.

[Establishment of technical work norms in enterprises of the food industry] Tekhnicheskoe normirovanie truda na predpriiatiiakh pishchevoi promyshlennosti. Moskva, Pishchevaia promyshl-st', [illegible] 36 p. (MIRA 18:3)

MEshkov, Yu. Ya.

25578
S/185/60/005/002/013/022
D274/D304

18.8100

AUTHOR: Myeshkov, Yu. Ya.

TITLE: Magnetometer for studying phase transformations under fast heating and cooling

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 5, no. 2, 1960, 252-257

TEXT: A method is described for the study of fast heating of steels by simultaneous recording of temperature, elongations, magnetic properties, and electrical conductivity of wire specimens of diameter 1.5 to 2.0 mm. A small size (200 x 180 x 80 mm) a.c. magnetic instrument is described in detail; this instrument permits obtaining variable magnetic fields up to 3000 oerst. This instrument has been used for several years now in factories for control of coatings of steels, etc. Yu. Ya. Myeshkov and Yu. I. Pilipchenko (Ref. 5: Peredovoy nauchno-tekhnicheskiv i proizvodstvennyy opyt, Filial VINITI, tema 33, no. P-58-152/8, 1958). The instrument has the advantage of compactness and simplicity of design and servicing

Card 1/4

Magnetometer for studying phase...

making it possible to obtain a virtually continuous record of magnetic properties of specimens which undergo heating, for sufficiently large rates of heating (up to 1000 deg/sec); the instrument can be readily combined with existing setups for the study of fast heating processes, making it possible to devise a complex method of research (which involves the recording of the parameters mentioned at the beginning of the article). The main disadvantage of the instrument consists in the dependence of the readings on the distance between specimen and magnetic poles, and also in a phase-shift. Therefore, the instrument can be used for the time being for qualitative analysis only. But even simple qualitative analysis of magnetic properties of steel under fast heating and cooling would give much valuable data which could not be obtained by other methods. Fig. 1 shows a basic diagram of the instrument. Measuring coils W_1 to W_4 are connected to rectifier circuits M_1, M_2; the voltage is applied (through R_1 and R_2) to the measuring loop L; in this case a 9-loop oscillograph. A current passing through coil W_o induces a magnetic flux with maximum value Φ_m. A table is given with the operating conditions of the instrument. In weak fields, the sensitivity of

Magnetometer for studying phase...

the instrument is greatly increased when the magnetic phase in the specimen approaches 100%; hence sufficiently subtle changes in the magnetic state of the specimen can be detected. The rate of heating is regulated by means of the voltage applied to the specimen. The duration of heating is fixed by a time relay. Typical oscillograms of heated steel specimens U8A are shown. If the instrument is supplied by an a.c. -source of 50 cy., 100 measurements per second can be taken of magnetic properties; this makes it possible to study heating processes up to rates of 5000 deg/sec; for higher rates of heating, the instrument has to be supplied by a 200 cy. a.current; this would require some slight change in the design of the instrument. The author studied heating processes not exceeding rates of 1000 deg/sec. There are 3 figures, 1 table and 7 Soviet-bloc references.

ASSOCIATION: Instytut metalofizyky AN USSR (Institute of Metalphysics AS UkrSSR)

SUBMITTED: July 10, 1959

Card 3/4

GRIDNEV, V.N. [Hridniev, V.N.]; MESHKOV, Yu.Ya. [Mieshkov, IU.IA.]

Austenite formation in rapid heating. Dop.AN URSR no.6:780-783 '60. (MIRA 13:7)

1. Institut metallofiziki AN USSR. 2. Chlen-korrespondent AN USSR (for Gridnev).
(Austenite)

18.8100 1413, 2808, 4016

26859
S/021/60/000/008/009/011
D210/D305

AUTHORS: Hridnyev, V.N., Corresponding Member AS UkrSSR, and Myeshkov, Yu.Ya.

TITLE: On certain peculiarities of steel softening when electrically heated

PERIODICAL: Akademiya nauk Ukrayins'koyi RSR, Dopovidi, no. 8, 1960, 1081 - 1084

TEXT: The aim of the paper was to find intervals of temperature and the kinetics of the relaxation processes of steel tensions. The steels used in the research were Y8A (U8A), 15XA (15KhA), 38XA (38KhA) and LUX6 (ShKh6) for tempered steel and U8A and 38KhA for 33 % or 80 % deformed steel, in the form of wire 90 mm long and with an 1 : 8 mm diameter heated by the use of industrial current; the temperature, extension and magnetization were registered during the experiments. The steels were heated to different temperatures and tempered by water. In some cases the repeated heating of

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On certain peculiarities of steel ...

samples was performed and the hardness according to Vickers was measured, as well as tensions of second type. On the deformed steel only the hardness of the steel was measured. At the beginning, with the increase of temperature the magnetization increases, but slackens at peak point (from 200°-280°C). Then, beginning with 340-350°C during the period of carbide transformation it sharply decreases. It was shown previously that with an increasing temperature, the tempered or deformed steel softens. It would be reasonable, to suppose that these processes of softening in some way show the influence on the magnetic properties of warming steel. According to Becker and Kersten (Ref. 4: Zeitschrift fur Physik, 69, 660, 1930). Magnetization in non-saturated magnetic fields I is equal to

$$I = \frac{I_s^2}{3\lambda_s \sigma} H,$$

where I_s is magnetization of saturation, and H is strength of the

field. According to this the decrease of internal stresses induce the increase of magnetization. Therefore, the course of magnetization could be explained as a relaxation of internal stresses. The author tries to explain the process of the steel softening. In his view the softening of the steel has at the early stages a thermoelastic character. By cooling to room temperature this softening disappears. As the temperature increases, the magnetization remnants increase constantly. The general assumption is that it is connected with the dependence of the modulus of elasticity E on the temperature; it decreases when temperature increases, and, therefore, according to Hooke's law, decreases σ ($\sigma = \varepsilon E$ where ε - deformation). Next the author points out that the $\alpha \rightarrow \gamma$ transformation does not completely soften steel; for complete softening, a temperature of over 950°C (for Y8A (U8A) steel) is required, at which point recrystallization of austenite apparently takes place. There are 3 figures and 8 references: 7 Soviet-bloc and 1 non-Soviet-bloc.

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26859
S/021/60/000/008/009/011
On certain peculiarities of steel ... D210/D305

ASSOCIATION: Instytut metalofizyky AN USSR (Institute of Metallophysics AS UkrSSR)

SUBMITTED: March 1, 1960

Card 4/4

S/601/60/000/011/005/014
D207/D304

AUTHORS: Gridnev, V. N., and Meshkov, Yu. Ya.

TITLE: Magnetometric studies of tempering quenched steels by electrical heating

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Instytut metalofyzyky. Sbornik nauchnykh rabot. no. 11. 1960. Voprosy fiziki metallov i metallovedeniya, 74-81

TEXT: The authors investigated the effects of tempering on phase transformations and internal stresses in structural steels 15Х (15Kh) and 38ХА (38KhA) and instrument steels ШХ6 (ShKh6) and У8А (U8A). The samples were long wires of 1.5 - 2.4 mm diameter. Before tempering, they were heated in argon and then quenched; ShKh6 and U8A were subjected to "cold treatment" in liquid nitrogen. Next, the samples were tempered by passing 50 c/s current through them, which raised the tempera-

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ture at the rate of 250 - 300 deg/sec. Expansion and magnetization of the samples were recorded during tempering. Magnetization was measured with a 50 c/s magnetometer applying weak fields (200 Oe) to the samples. The use of weak fields is claimed to be an important innovation since magnetization is practically unaffected by structural changes or internal stresses in magnetic fields which are strong enough to produce saturation. The steels ShKh6 and U8A contained residual sustenite (before tempering), which decomposed above the carbide transformation ($\sim$ 400°C). This decomposition was very rapid (0.3 - 0.4 sec.) when it occurred between 470 and 500°C. If heating was stopped near the carbide transformation region, all residual austenite in ShKh6 and U8A decomposed during cooling to room temperature. In 15Kh and 38KhA, heating to the temperature of the carbide transformation relieved internal stresses. There are 5 figures, 1 table and 7 references: 6 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: Grancle and Sucksmith, J. of Iron and Steel Inst., 168, part II, 1957.

Card 2/3

Magnetometric studies of...

S/601/60/000/011/005/014
D207/D304

SUBMITTED: October 5, 1959

Card 3/3

S/601/60/000/011/007/014
D207/D304

AUTHORS: Gridnev, V. N., Meshkov, Yu. Ya., and Sul'zhenko, V. K.

TITLE: Electrical tempering of chromium steels

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Instytut metalofyzyky. Sbornik nauchnykh rabot. no. 11. 1960. Voprosy fiziki metallov i metallovedeniya, 87-93

TEXT: The authors report a study of the changes in structure and mechanical properties produced by electrical tempering of chromium steels 38ХА (38KhA) and ШХ6 (ShKh6). The samples (130 mm long wires of 1.8 - 2.4 diameter) were first quenched from temperatures which ensured dissolution of carbides and were then cooled in liquid nitrogen. The samples were next tempered by passing a 50 c/s current through them so that the temperature rose at 900 - 1100°C/sec. The voltage across the sample, the

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current through it, and the changes of length were recorded during heating. Temperature was measured with a thermocouple and recorded with loop no. 8 of an oscillograph 9S0-302. After tempering, the samples were cooled in water at the rate of 1500 - 2000 °C/sec. The effects of tempering on the extension produced by tensile forces, the yield point, and the ultimate tensile strength were measured on both steels and the bending strength on ShKh6 only; all these measurements were relative. Deformations of type II and the mosaic block structure were investigated using X-ray diffraction (Fe emission in a Debye camera). The magnetic coercive force and the Vickers hardness were also measured. It was found that tempering by direct electric heating produced higher tensile and bending strengths, with a relatively small loss of ductility, than did tempering in a furnace. The improvement was more marked in 38KhA, which had a lower carbon content. Comparison of furnace tempering with direct electric heating showed also that the latter produces more deformations of type II, greater dispersion of coherent regions (blocks) and of

Electrical tempering... S/601/60/000/011/007/014
D207/D304

carbide precipitates. There are 5 figures, 1 table and 8 Soviet bloc references.

SUBMITTED: September 23, 1959

Card 3/3

MESHKOV, Yu. Ya.

Cand Tech Sci - (diss) "Study of phase and structural transformations in rapid heatings of chrome steel." Kiev, 1961. 13 pp; (Academy of Sciences Ukrainian SSR, Division of Tech Sci Academy of Sciences Ukr SSR); 120 copies; price not given; (KL, 10-61 sup, 216)

S/123/62/000/011/005/011
A052/A101

AUTHORS: Gridnev, V. N., Meshkov, Yu. Ya.

TITLE: Electrical heat treatment of chromium steels

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 11.1962, 37, abstract 11B220 (V sb. "Prom. primeneniye tokov vysokoy chastoty v elektro-termii", Moscow-Leningrad, Mashgiz, 1961, 102 - 108)

TEXT: The effect of electrical tempering on the structure and mechanical properties of 15 X (15Kh), 38 X (38Kh) and IIIX6 (ShKh6) chromium steels is considered. The electrical tempering of samples hardened at normal temperature is realized by a direct passing of alternating current of commercial frequency. When the set temperature is reached the heating is switched off and the water shower is switched on. The rate of heating at tempering is 1,000 deg/sec and the rate of cooling is 1,500 - 2,000 deg/sec. It is established that the electrical tempering leads to a sharp increase of hardness compared with the furnace tempering at the same temperature. The steel subjected to electrical tempering has higher strength characteristics (σ_b increases by 40 - 70 kg/mm^2) and a little lowered

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S/123/62/000/011/005/011
A052/A101

Electrical heat treatment of chromium steels

ductility (S). Electrically tempered steel combines a comparatively high notch toughness with a increased strength. The possibility of combining strength with ductility and the technical advantages of electrical tempering (high efficiency, the possibility of automation and application on production lines) make electrical tempering a promising method of heat treatment.

E. Spivak

[Abstracter's note: Complete translation]

Card 2/2

GRIDNEV, V.N., doktor tekhn.nauk, prof.; MESHKOV, Yu. Ya., inzh.

Electric tempering of chromium steel. Metalloved. i term. obr. met. no.6:2-4 Je '61. (MIRA 14:6)

1. Institut metallofiziki AN USSR.
(Chromium steel--Heat treatment)
(Tempering)

GRIDNEV, V.N.; MESHKOV, Yu.Ya.

Effect of the rate of heating on temperature transformation intervals during the electric tempering of steel. Sbor. nauch. rab. Inst. metallofiz. AN URSR no.14:116-120 '62. (MIRA 15:6)
(Steel--Metallography) (Electric heating)

MESHKOV, Yu.Ya.

Microdistribution of temperatures during the electric heating of heterogenous alloys. Sbor. nauch. rab. Inst. metallofiz. AN URSR no.15:201-209 '62. (MIRA 15:12)
(Metals, Effect of temperature on) (Phase rule and equilibrium)

GRIDNEV, V.N.; MESHKOV, Yu.Ya.; TREFILOV, V.I.

Some technological problems in the electric tempering of steel. Sbor. nauch. rab. Inst.metallofiz. AN URSR no.16:198-204 '62. (MIRA 16:5)

(Steel--Heat treatment) (Tempering)

MESHKOV, Yu.Ya.

Calculation of critical points during the continuous heating of eutectoid-type alloys. Sbor. nauch. rab. Inst. metallofiz. AN URSR no.17:138-142 '63. (MIRA 17:3)

GRIDNEV, V.N.; MESHKOV, Yu.Ya.; PETROV, Yu.N.

Electron microscopy of the carbide phase during the electric tempering of chromium steels. Sbor. nauch. rab. Inst. metallofiz. AN URSR no.17:147-150 '63. (MIRA 17:3)

GRIDNEV, V.N.; MESHKOV, Yu.Ya.; CHERNENKO, N.F.

Critical points of the titanium-chromium alloy during rapid heating. Sbor. nauch. rabot. Inst. metallofiz. AN URSR no.17:143-146 '63.

Complex equipment for the study of phase transformations during rapid heating. Ibid.:187-192 (MIRA 17:3)

GRIDNEV, V.N.; LIKHOVSKIKH, M.N.; MESHKOV, Yu.Ya.; TREFILOV, V.I.

Induction heating with rapid electric tempering. Metalloved. i term. obr. met. no.1:59 Ja '64. (MIRA 17:3)

GRIDNEV, V.N.; MESHKOV, Yu.Ya.; CHERNENKO, N.F.

Critical points of titanium-iron alloys during rapid heating.
Sbor. nauch. rab. Inst. metallofiz. AN URSR no.18:100-106
'64

MESHKOV, Yu.Ya.; OSHKADEROV, S.P.

Methods of temperature recording during ultra high-speed heating of iron. Sbor. nauch. rab. Inst. metallofiz. AN URSR no.18:216-219 '64. (MIRA 17:8)

GRIDNEV, V.N.; MESHKOV, Yu.Ya.; OSNOVADEROV, S.P.

Composition of austenite in γ-iron during the rapid heating of steel. Sbor.nauch.trud. Inst. metallofiz. AN URSR no.9 [illegible] 159 [illegible]. (MIRA 18:5)

GRIDNEV, V.N.; MESHKOV, Yu.Ya.; OSHKADEROV, S.I.

Diagram of the isothermal formation of austenite in steel.
Sbor. nauch. trud. Inst. metallofiz. AN UkSSR no.20:148-153
'64. (MIRA 18:5)

MESHKOV, Yu.Ya.; OSHKADEROV, S.P.; CHERNENKO, V.F.

Equipment for complex investigations of phase transformations under the effect of rapid heating. Sbor. nauch. trud. Inst. metallofiz. AN URSR no.20:198-202 '64.

(MIRA 18:5)

L 36621-65 EWT(m)/EWA(d)/T/EWP(t)/EWP(b)/EWA(c) MJW/JD
ACCESSION NR: AP5002356 S/0126/64/018/006/0938/0939

21
20
B

AUTHOR: Gridnev, V. N.; Meshkov, Yu. Ya.; Oshkaderov, S. P.

TITLE: Temperature of austenite formation during rapid heating of steel and iron

SOURCE: Fizika metallov i metallovedeniye, v. 18, no. 6, 1964, 938-939

TOPIC TAGS: austenite, austenite formation, formation temperature, iron, U8A steel, nondiffusion transformation

ABSTRACT: The temperatures at which austenite was formed from pure iron, or from tempered, normalized or annealed U8A steel by heating at different rates (20-6000 deg/sec for steel and up to 10000 deg/sec for iron) were determined. The moment of the α -γ transformation was determined by dilatometric analysis which indicated compression changes on an oscillogram. The study confirmed the practically linear rise in the critical point as the heating rate increased, and indicated the rate of this rise depended on the initial structural state: the coarser the initial structure, the greater the dependence on the heating rate.

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L 36621-65
ACCESSION NR: AP5002356

Since the rise of the critical point in steel was much more rapid than in iron, it appeared theoretically possible to coincide the critical points in iron and in pearlite by heating the latter sufficiently rapidly. This was not achieved experimentally. Absolute nondiffusion transformation by heating annealed steel is apparently not possible because in the 723-905C range some portion of the austenite was always formed by diffusion. Comparison of the relative path of the curves obtained over a wide heating range for iron and for the investigated steels led to the suppostion that the $\alpha - \gamma$ transformation in steel can be realized, although not completely, by a nondiffusion mechanism. Orig. art. has: 1 figure and 1 equation

ASSOCIATION: Institut metallofiziki AN UkrSSR (Institute of Metallophysics, AN UkrSSR)

SUBMITTED: 10Mar64 ENCL: 00 SUB CODE: MM

NR REF SOV: 008 OTHER: 000

Card 2/2

MESHKOV, Yu.Ya.

Critical points in the polymorphic transformations of iron during rapid heating. Sbor. nauch. rab. Inst. metallofiz. AN URSR no.[illegible] 1964 (MIRA 17:8)

GRIDNEV, V.N.; MESHKOV, Yu.Ya.; OSHKADEROV, S.P.

Critical points of pure iron during rapid electric heating.
Sbor. nauch. rab. Inst. metallofiz. AN URSR no.18:96-99 '64
(MIRA 17:8)

ACCESSION NR: AT4042836 S/2601/64/000/018/0100/0106

AUTHOR: Gridnev, V. N.; Meshkov, Yu. Ya.; Chernenko, N. F.

TITLE: Critical points of rapidly heated titanium-iron alloys

SOURCE: AN UkrSSR. Institut metallofiziki. Sbornik nauchny*kh rabot, no. 18, 1964. Voprosy* fiziki metallov i metallovedeniye (Problems in the physics of metals and physical metallurgy), 100-106

TOPIC TAGS: titanium alloy, titanium iron alloy, alloy phase transformation, critical heating rate, rapid heating, diffusional phase transformation, nondiffusional phase transformation

ABSTRACT: Vacuum-arc-melted Ti-base alloys containing 8% Fe were forged, drawn, and then vacuum annealed at 850C for 150 hr. The obtained eutectoid was a coarse-grained mixture of the α-phase and a Ti-Fe intermetallic compound. Specimens were heated at a rate varying from 0.05 to 1300 deg/sec, and the transformation points were determined by the dilatometric and electric resistivity measurements. It was found that the temperature of the beginning of the transformation increased first rapidly (from ~580 to ~775C) as the heating

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ACCESSION NR: AT4042836

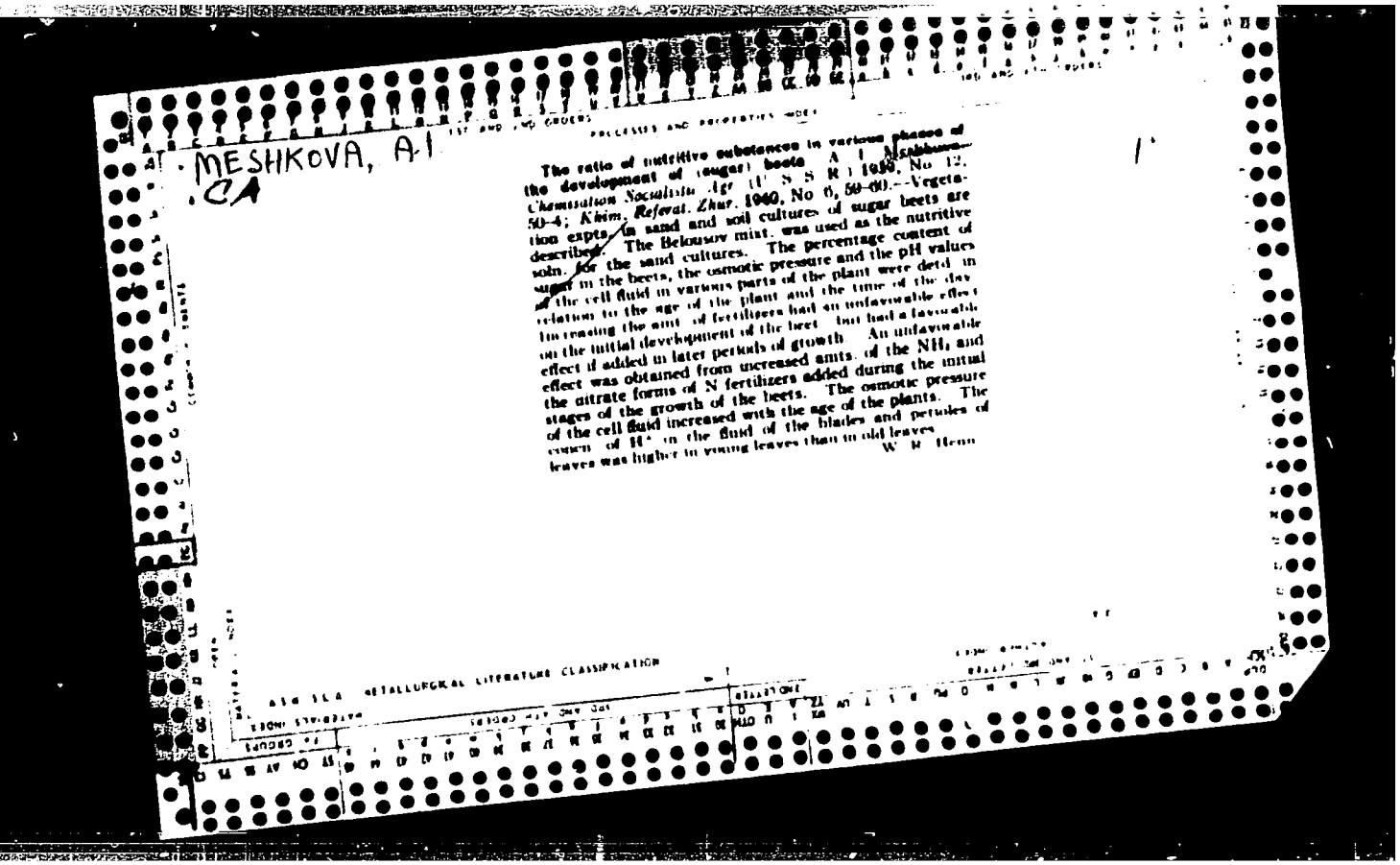
rate was increased to 100 deg/sec, then more slowly (from ~775 to 825C) as the heating rate was increased from 100 to 400 deg/sec, and practically stabilized at 850C at higher heating rates. A good agreement between the critical heating rate (470 deg/sec) calculated for the diffusional transformation mechanism and the experimental rate (~400 deg/sec) shows that with heating at a rate lower than the critical, i.e., 400 deg/sec, the high-temperature β-phase is formed by diffusional interaction of the α-Ti and TiFe phases of the eutectoid. With heating at a rate higher than the critical, the formation mechanism of the high-temperature β-phase becomes nondiffusional, i.e., the α-phase first is transformed to the β-phase of the same composition and only later, with further increase in temperature, the TiFe intermetallic compound dissolves in the β-phase. Orig. art. has: 6 figures and 1 table.

ASSOCIATION: Institut metallofiziki AN UkrSSR (Institute of Physics of Metals, AN UkrSSR)

SUBMITTED: 01Mar63 ATD PRESS: 3086 ENCL: 00

SUB CODE: MM, IE NO REF SOV: 010 OTHER: 000

Card 2/2



MESHKOVA, A.I.
CA

The ratio of nutritive substances in various phases of the development of sugar beets. A. I. Meshkova. *Chemisation Socialistic Agr.* (U. S. S. R.) 1940, No. 12, 50-4; *Khim. Referat. Zhur.* 1940, No. 6, 50-60.—Vegetation expts. in sand and soil cultures of sugar beets are described. The Belousov mixt. was used as the nutritive soln. for the sand cultures. The percentage content of sugar in the beets, the osmotic pressure and the pH values of the cell fluid in various parts of the plant were detd. in relation to the age of the plant and the time of the day. Increasing the amt. of fertilizers had an unfavorable effect on the initial development of the beet but had a favorable effect if added in later periods of growth. An unfavorable effect was obtained from increased amts. of the NH_4 and the nitrate forms of N fertilizers added during the initial stages of the growth of the beets. The osmotic pressure of the cell fluid increased with the age of the plants. The concn. of H^+ in the fluid of the blades and petioles of leaves was higher in young leaves than in old leaves.

W. H. Hess

Meshkova, A. I.

USSR/Cultivable Plants - Grains.

Abs Jour : Ref Zhur - Biol., No 3, 1958. 10690

Author : Meshkova, A.I.

Inst : Severo-Osetin Agricultural Institute

Title : The Consequences Which Potato Planting Methods Have on Winter Wheat Yields.

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Abstract : The results are given of experiments conducted on the leached chernozems of the foothills of Ordzhonikidzevskii rayon, Severo-Osetinskaya ASSR. According to the data of a 1951 experiment the 0-50 cm. soil layer possessed the following quantities of utilizable soil water at the time when wheat was planted (8/X) (October 8): 38.2 mm. on plots where potatoes had been planted by the square nest method (70 x 70), 24.8 mm. on plots where potatoes were

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(Sevan, Lake--Fresh-Water biology)

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